

## What Is a Cochlear Implant?

A cochlear implant is an electronic device that is surgically installed behind the ear that may enable a severely hard of hearing or profoundly deaf individual to experience warning sounds (e.g. car horns) and voices, improve speechreading, and monitor their speech.

There are two parts of the cochlear implant: one internal and the other part is worn externally. The external part can be adjusted, taken off at night, or when swimming and showering. The external parts needs to be recharged and new batteries installed after 10-16 hours of use depending on the device.

There are up to 24 electrodes in the inner ear depending on the type of device and a hidden magnet attached to the head. The processor, worn outside the body is programmed to accept sounds through a microphone and create electrical signals that are transmitted through the magnet to the electrodes. The brain translates the signals from the auditory nerve, which received the signals from the electrodes.

The total cost for a cochlear implant can range from \$30,000 to \$50,000. This includes equipment, surgery and limited rehabilitation; some insurance will pay for all or part of the cost depending on the plan. The consumer is responsible to pay for replacement external parts that may break or wear out and for the batteries.

### What are some of the potential benefits?

- Increased sound awareness
- Easier speech reading
- Possibilities for some use of the phone
- Improved speech management

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## **What are the potential risks?**

- General medical risks from surgery involving general anesthesia
- Loss of residual hearing in the implanted ear
- No guarantee of noticeable hearing improvement,
- May need to have second surgery if first surgery doesn't work.
- Bacterial meningitis, a potentially life-threatening infection of the membranes surrounding the brain and spinal cord, according to US FDA- July 2002

## **Possible questions to ask yourself and the doctor:**

Who will pay for the surgery?

How much time is needed to take off from work for surgery and recovering?

Will I wear a special bracelet? Need to have a special bracelet for emergency if X-Ray or MRI is necessary.

What assistive devices are needed with Cochlear Implant to help hear on the phone, in auditorium, or for a seminar?

What are the problems of traveling frequently on airlines? A special card will be provided for going through the metal detector.

How does cell phones affect cochlear implant?

How does sweat affect the cochlear implant?

What limitations are there in regards to sports or rough activities? (Such as football, soccer, skiing, swimming, playground activities, playing on slide)

Why should I stay away from wearing wool?